

REMARKS

This Amendment is in response to the Office Action mailed March 28, 2007. With this Amendment claims 1-13 are cancelled, and the remaining claims are unchanged. Reconsideration and withdrawal of the rejections are respectfully requested in view of the following remarks.

Rejection under §112

On page 2 of the Office Action the Examiner rejected claim 1-14 as failing to comply with 35 U.S.C. §112 first paragraph. The Examiner indicated that the Applicant's previous amendment added new subject matter to the Application. The Applicant first notes that independent claim 14 has not been amended and therefore cannot be rejected based on new matter. Additionally, claims 1-13 are cancelled with this Amendment. Therefore, the Applicant respectfully submits that the rejection has been overcome. Reconsideration and withdrawal of the rejection are respectfully requested.

On page 3 of the Office Action the Examiner rejected claims 1-13 under 35 U.S.C. §112 second paragraph. As these claims have been cancelled from the application, it is respectfully submitted that this rejection is now moot.

Rejection under §101

On page 3 of the Office Action the Examiner rejected claim 1-20 under 35 U.S.C. §101 as being directed to non-statutory subject matter. The Applicant respectfully disagrees.

35 U.S.C. §101 provides:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Thus, 35 U.S.C. §101 defines four categories of inventions that Congress deemed to be appropriate subject matter of a patent: processes, machines, manufactures, and compositions of matter. The latter three categories define “things” or “products” while the first category defines “actions”. See 35 U.S.C. §100(b) (“The term ‘process’ means process, art, or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.”).

As the Supreme Court held, Congress chose the expansive language of 35 U.S.C. §101 so as to include “anything under the sun that is made by man.” *Diamond v. Chakrabarty*, 447 U.S. 303, 308-09, 206 USPQ 193, 197 (1980). The Federal Circuit has embraced this perspective:

The plain and unambiguous meaning of section 101 is that any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may be patented if it meets the requirements for patentability set for in Title 35, such as those found in sections 102, 103, and 112. The use of the expansive term “any” in section 101 represents Congress’s intent not to place any restrictions on the subject matter for which a patent may be obtained beyond those specifically recited in section 101 and the other parts of Title 35 ... Thus, it is improper to read into section 101 limitations as to the subject matter that may be patented where the legislative history does not indicate that Congress clearly intended such limitations. *In re Alappat*, 33 F.3d 1526, 1542, 31 USPQ2d 1545, 1556 (Fed. Cir. 1994).

Accordingly, a complete definition of the scope of 35 U.S.C. §101, reflecting Congressional intent, is that any new and useful process, machine, manufacture, or composition of matter (or any new and useful improvement thereof) under the sun that is made by man is the proper subject matter of a patent.

The subject matter courts have found to be outside of, or exceptions to, the four statutory categories of invention is limited to abstract ideas, laws of nature, and natural phenomena. These three judicial exclusions recognize that subject matter that is not a practical application or use of an idea, a law of nature, or natural phenomena is not patentable. See, e.g., *Mackay Radio & Telegraph Co. v. Radio Corp. of America*, 306 U.S. 86, 94, 40 USPQ 199, 202 (1939) (“While a

scientific truth, or the mathematical expression of it, is not patentable invention, a novel and useful structure created with the aid of knowledge of scientific truth may be.”). The courts have held that a claim may not preempt ideas, laws of nature, or natural phenomena. Accordingly, one may not patent every “substantial practical application” of an idea, law of nature, or natural phenomena because such a patent “in practical effect be a patent on the [idea, law of nature or natural phenomena] itself.” *Gottschalk v. Benson*, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972).

To determine if an exception is eligible for a patent, a physical transformation “is not an invariable requirement, but merely one example of how a mathematical algorithm [or law of nature] may bring about a useful application.” AT&T, 172 F.3d at 1358-59, 50 USPQ2d at 1452. If the Examiner determines that the claim does not entail the transformation of an article, then the Examiner shall review the claim to determine if it produces a useful, tangible, and concrete result. In making this determination, the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather on whether the final result achieved by the claimed invention is “useful, tangible, and concrete.”

In determining whether a claim provides a useful, tangible, and concrete result, the Examiner should consider and weigh the following factors: For an invention to be “useful” it must satisfy the utility requirement of § 101. That is the utility of an invention has to be (i) specific, (ii) substantial and (iii) credible. See MPEP § 2107. For an invention to be tangible, it does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. It simply must provide an application of the idea or law of nature. For an invention to be concrete, the process must have a result that can be substantially repeatable or the process must substantially produce the same result again. *In re Swartz*, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000)

Thus, in determining if a claim is directed to statutory subject matter the Examiner should follow a three step process. The first step is to determine if the claims are directed towards a

new and useful process, machine, manufacture, or composition of matter. Second, once the Examiner has determined that the claims are directed towards statutory subject matter, the Examiner then must determine if the claims are directed towards a judicially created exception to statutory subject matter. Thus, the Examiner should determine if the claims are directed towards an abstract idea, a law of nature or a natural phenomena. Third, if the Examiner determines that the claims are directed towards an exception to patentability, the Examiner must still determine if the claims are directed towards an exception to the exception. That is the claim must produce a useful, tangible and concrete result. Only then can the Examiner determine that a claim is or is not statutory.

Claim 20 is directed to a method of testing through the use of a defined process. More specifically, claim 20 discloses a method for modifying the acquisition of a new electromagnetic physiological signal. Claim 20 requires, generally, the steps of acquiring an electromagnetic physiological signal, performing source reconstruction on the signal, and then based on the source reconstruction modifying the acquisition of the new signal. This is clearly statutory subject matter. Claim 1 enumerates a process which is statutory subject matter. This process results in a useful, tangible, and concrete result, that is, modification of the device acquiring the new signal. There is no requirement that the result be output or used, only that the result is capable of being outputted or used. Therefore, claim 20 is believed to contain statutory subject matter.

Claims 14-19 are directed to an apparatus having various components. The claims are directed to an apparatus, which is statutory subject matter. More specifically, claim 14 discloses an apparatus having a sensor, a signal processing circuit, and a processor. Each of these components is further defined with respect to either their arrangement between the components or their function. The Examiner baldly states that claim 14 is directed towards an abstract idea. The Examiner merely stated the entire language of claim 14 in asserting that the claim is to an abstract idea. However, the Examiner has failed to explain why claim 14 is directed to an

abstract idea or what the abstract idea is. As the Examiner has failed to show the abstract idea that is asserted it is respectfully submitted that claims 14-19 are directed to statutory subject matter, that is an apparatus. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejections under §102

On page 7 of the Office Action the Examiner rejected claims 1, 2, 7-11, 13-15, and 18-20 under 35 U.S.C. §102(b) as being anticipated by Ohyu et al., U.S. Patent No. 6,187,032, (hereinafter “Ohyu”). The Applicant respectfully disagrees.

It is well settled that to anticipate a claim, the reference must teach every element of the claim, see M.P.E.P. §2131. Moreover, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, “[t]he elements must be arranged as required by the claim,” see M.P.E.P. § 2131, citing *In re Bond*, 15 US.P.Q.2d 1566 (Fed. Cir. 1990). Furthermore, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim,” see M.P.E.P. § 2131, citing Richardson v. Suzuki Motor Co., 9 U.S.P.Q.2d 1913 (Fed. Cir. 1989). The Applicant respectfully asserts that the rejection does not satisfy these requirements.

Independent claim 14 requires “a processor . . . configured to support multiple threads of execution....” Multiple threads of execution are defined on page 4 of the specification as “a single sequence of instructions executed in parallel with other sequences....” Multiple threads differ from multi-tasking in that multi-tasking is independent processes and multiple threads share information, memory and other resources directly between each thread. The Examiner indicated that Ohyu disclosed a processor configured to support multiple threads of execution in column 12 lines 4-20. The cited section of Ohyu discloses multi-tasking and not multiple threads of execution. Ohyu does not disclose the steps executed in parallel nor the direct sharing of

information, memory or other resources between any of the algorithms. Therefore, it is respectfully submitted that Ohyu does not disclose the limitations of claim 14 in its entirety. Thus, claim 14 is believed allowable over Ohyu. Furthermore, dependent claims 15-19 are believed allowable as well by virtue of their dependency either directly or indirectly from allowable claims. Reconsideration and withdrawal of the rejection are respectfully requested.

Claim 20 requires “using the source reconstruction to modify the acquisition of a new electromagnetic physiological signals.” The Examiner indicated that this was disclosed by Ohyu. However, the Examiner did not provide a citation to a portion of Ohyu for teaching this element. However, Ohyu does not teach using a source reconstruction to modify the acquisition of a new electromagnetic physiological signal. Therefore, it is respectfully submitted that the Ohyu does not anticipate claim 20. Reconsideration and withdrawal of the rejection are respectfully requested.

#### Rejections under §103

On page 9 of the Office Action the Examiner rejected claims 3-6, 13, 16 and 17 under 35 U.S.C. §103(a) as being unpatentable over the Ohyu in view of Kiyuna, U.S. Patent No. 6,073,040, (hereinafter “Kiyuna”). The Applicant respectfully disagrees.

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the references’ teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See M.P.E.P. § 2143.* Applicant asserts that the rejection does not satisfy the basic criteria.

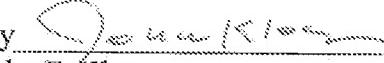
Claims 16 and 17 depend from independent claim 14. As discussed above Ohyu does not teach or suggest all of the elements of independent claim 14. The addition of Kiyuna does not remedy the deficiencies identified above. Therefore, the combination of Ohyu and Kiyuna cannot teach or suggest all of the elements of the dependent claims. Therefore, claims 16 and 17 are believed allowable over the combination of Ohyu and Kiyuna. Reconsideration and withdrawal of the rejection are respectfully requested.

In view of the above, applicant believes the pending application is in condition for allowance. Reconsideration and allowance of the pending claims are respectfully requested.

Applicant believes no fee is due with this response. However, if an extension of time fee or any other fee is due, please charge Deposit Account No. 50-1212 (ref. 10400826) from which the undersigned is authorized to draw.

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Respectfully submitted,

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